



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/404,772 | 09/24/1999 | RANDALL A. HAVNER | 99SW087 | 8769 |

7590

12/30/2003

JOHN J HORN ESQ
ALLEN BRADLEY COMPANY PATENT DEPT 704P
8TH FLOOR T 29
PO BOX 2086
MILWAUKEE, WI 532019814

EXAMINER

NAHAR, QAMRUN

ART UNIT

PAPER NUMBER

2124

DATE MAILED: 12/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/404,772

Applicant(s)

HAVNER ET AL.

Examiner

Qamrun Nahar

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 2124

DETAILED ACTION

1. This action is in response to the amendment filed on 10/6/03.
2. The objections to claims 6, 10 and 16 are withdrawn in view of applicant's amendments.
3. Claims 19-30 have been added.
4. Claims 1, 6, 10 and 16 have been amended.
5. Claims 1-30 are pending.
6. Claims 1-30 stand finally rejected under 35 U.S.C. 102(b) as being anticipated by Lewis (U.S. 5,812,394).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Lewis (U.S. 5,812,394).

Per Claim 1 (Amended):

The Lewis patent discloses:

- a library system for creating programs executable on an industrial controller to control an industrial process ("it is a primary object of the present invention to provide a development

Art Unit: 2124

system for control systems that allows users to define, in an intuitive fashion, the control scheme for a facility by combining the definition of the physical facility with the definition of the logical instructions which comprise the control scheme. ... Still another object of the present invention is to provide a unique and advantageous approach to creating, storing, and maintaining a library of control scheme routines compared to the traditional, manual method.” in column 11, lines 58-63 and column 12, lines 13-16)

- a library manager collecting in unique files, at least first and second program fragments having shared control variables determining physical inputs or outputs exchanged with the industrial process, the shared control variables having common tags (“Referring to FIG. 3, the significance of the internal connection line 130 is evident when examining the definition of the controller device by double clicking on it. The act of drawing connection line 130 between FT-1230 and FIC-1230 caused an internal association of tags between those devices. Effectively, this dashed line logically linked these two devices. The instrument connection 128 allows the device diagram to expose information about the logical and physical connections of the instrumentation and input/output points of the control I/O hardware. Again, this information co-exists on the same diagram that shows the physical facility, illustrating how the symbolic, graphics based approach conveys multiple types of information in a single entity. ... UCOS Device Templates allow engineers to build their library within the control scheme development environment. Additionally, UCOS supplies starter routines for control of typical devices. The power of Device Templating is augmented by the ease with which templates can be applied when building a device diagram. Fig. 13 shows how a user places a pump device on a device

Art Unit: 2124

diagram by instantiating the definition based on a pump device template object. ... All UCOS devices, when placed (or instantiated) on a device diagram, come from a template. UCOS devices have a template structure which incorporates user-modifiable logic, tag definitions, and graphic symbol dynamics. ... Tag management is one of the primary advantages of UCOS templates compared to manually building a library of routines. Because UCOS templates are an intrinsic part of the Device Diagram and Device Logic development process, the user does not have to perform traditional search and replace editing functions on the inherited logic.” in column 18, lines 26-39; column 27, lines 44-67 to column 28, lines 1-8; device objects are interpreted as a first type and device symbols are interpreted as a second type)

- a first program builder accepting user input to link in a first linking process instances of first program fragments from files in the library manager together to create a first portion of the control program; the first program builder renaming tags of control variables of duplicate instances of first program fragments to be unique (“A device logic developing component defines the logical instructions of the device objects relating to the equipment or control functions. Thus, the development system integrates in a graphical format the physical description of the facility with the logical instructions which define the control scheme for the facility. These logical instructions unify the configuration of analog/regulatory control with the configuration of discrete/sequential control. ... Once a template is created, devices based on it can be inserted into device diagrams. The user simply chooses from a toolbar or menu the type of device he/she wants to insert, supplies relevant configuration information, and points in the diagram where that device is to be placed. ... Using object-oriented techniques, UCOS handles

Art Unit: 2124

all the overhead of making the device unique including making each tag name unique, as is illustrated in the FIG. 14. For example, Pump-1.Running is automatically changed to PMP-1236.Running.” in column 12, lines 52-60 and column 28, lines 26-46)

- a second program builder accepting information about the first linking process, and user input, to create a second portion of the control program from second program fragments taken from the same files of the first program fragments used in the first portion of the control program, the second program builder renaming the tags of the control variables of the second program fragments to comport with the renaming of the tags of the control variables of the first portions by the first program builder; whereby the second program fragments can communicate with the multiple instances of the first program fragments through common tags (“The development system includes a device diagramming component for describing a physical description of a facility and a logical definition of a control scheme for the facility. The device diagramming component includes a mode for selecting device symbols representative of equipment or control functions used in facilities. The device symbols are selected from an object-oriented repository containing a plurality of device symbols and device objects. Certain types of device symbols relate to device objects containing logical instructions and configuration information relating to the represented equipment or control functions. The device diagramming component also includes a mode for interrelating in a graphical manner the selected device symbols and their corresponding device objects into a device diagram representing the physical description of the facility and the logical definition of the control scheme of the facility. ... FIG. 13 illustrates the type of configuration information that could be

Art Unit: 2124

supplied for a discrete device upon insertion into a diagram. Note that the user chooses the template on which to base the new device, Pump-1, and specifies the name of the device, PMP-1236. When the user finishes filling out this dialog and clicks OK, he/she has specified all the configured parameters associated with the new device. This might include pages of logic, tag definitions, graphic symbols, and the dynamic behavior of graphic symbols. ... Using object-oriented techniques, UCOS handles all the overhead of making the device unique including making each tag name unique, as is illustrated in the FIG. 14. For example, Pump-1.Running is automatically changed to PMP-1236.Running.” in column 12, lines 36-52 and column 28, lines 31-46).

Per Claim 2:

The Lewis patent discloses:

- wherein the first program fragments provide control logic for industrial control and the second program fragments provide visualization of industrial control (column 12, lines 36-60).

Per Claim 3:

The Lewis patent discloses:

Art Unit: 2124

- wherein the renaming of the first and second program fragments incorporate at least a portion of a name of their unique file of the library manager into the tags of the renamed first and second program fragments (column 28, lines 42-46).

Per Claim 4:

The Lewis patent discloses:

- wherein the library manager holds at least two first program fragments having shared control variables with a second program fragment (column 27, lines 42-52 and column 28, lines 9-22).

Per Claim 5:

The Lewis patent discloses:

- wherein the second program builder accepts user input to select from among the at least two first program fragments, a first program fragment with which the renaming of the tags of the control variable of the second program fragment will comport (column 28, lines 26-46).

Per Claim 6 (Amended):

The Lewis patent discloses:

Art Unit: 2124

- wherein the second program builder provides at least one menu providing representations of first and second program fragments related to a common file of the library manager and wherein the user input for creating a second portion of the control program selects representations of the program fragments from the menu (column 28, lines 26-67).

Per Claim 7:

The Lewis patent discloses:

- wherein the menu depicts the first program fragments as dependent on particular items of physical equipment of the controlled process (column 28, lines 35-39).

Per Claim 8:

The Lewis patent discloses:

- wherein the library manager holds at least two second program fragments having shared control variables with a first program fragment (column 27, lines 42-52 and column 28, lines 9-22).

Per Claim 9:

The Lewis patent discloses:

Art Unit: 2124

- wherein the second program builder accepts user input to select from among the two second program fragments, a second program fragment with which the renaming of the tags of the control variables of the second program fragment to a first program fragment will comport (column 28, lines 26-46).

Per Claim 10 (Amended):

The Lewis patent discloses:

- wherein the second program builder provides at least one menu providing representations of first and second program fragments related to a common files of the library manager and wherein the user input for creating a second portion of the control program selects representations of the program fragments from the menu (column 28, lines 26-67).

Per Claim 11:

The Lewis patent discloses:

- wherein the menu depicts the first program fragments as dependent on particular items of physical equipment of the controlled process (column 28, lines 35-39).

Per Claim 12:

The Lewis patent discloses:

Art Unit: 2124

- wherein the files of the library manager denote phases of operation of a machine of the controlled process and wherein the files also include information related to the phase of operation denoted by the file but not a program fragment (column 27, lines 42-52 and column 28, lines 26-39).

Per Claim 13:

The Lewis patent discloses:

- wherein the first program fragments written in a language selected from the group consisting of: function block language, structured text language, ladder logic language and sequential function chart language (column 22, lines 1-19).

Per Claim 14:

The Lewis patent discloses:

- wherein the renaming is performed by concatenating a unique identifier onto the tag of the control variable (column 28, lines 42-46).

Per Claim 15:

The Lewis patent discloses:

Art Unit: 2124

- wherein the files of the library manager are identified to equipment of the controlled process (column 27, lines 42-47).

Per Claim 16 (Amended):

This is another version of the claimed library system discussed above, claim 1, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above, including “identifying the files of the library manager from which the instances of the first program fragments originated to display to a user second program fragments related to each instance of the first program fragments according to common library files” (column 28, lines 26-46), and “accepting user input to select among the displayed second program fragments” (column 28, lines 47-56), and “common tags are identified and utilized” (column 28, lines 42-56). Thus, accordingly, this claim is also anticipated by Lewis.

Per Claim 17:

This is another version of the claimed library system discussed above, claim 2, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also anticipated by Lewis.

Per Claim 18:

The Lewis patent discloses:

Art Unit: 2124

- wherein the renaming of the first and second program fragments incorporate a common name of their unique file of the library manager (column 28, lines 42-46).

Per Claim 19 (New):

The Lewis patent discloses:

- a system for creating a program (column 11, lines 58-63 and column 12, lines 13-16)
- a library having two pairs of program fragments stored in two library subportions, wherein one of the program fragments of each pair is of a first type and another of the program fragments of each pair is of a second type (column 18, lines 26-39; column 27, lines 44-67 to column 28, lines 1-8; device objects are interpreted as a first type and device symbols are interpreted as a second type)
- a device capable of distinguishing both among the pairs of program fragments and among the program fragments of different types; wherein the program is created in at least first and second stages during which, respectively, the program fragments of the first and second types are instantiated (column 12, lines 52-60 and column 28, lines 26-46)
- and wherein, during the second stage, the device identifies the program fragments of the second type that correspond to the program fragments of the first type that were

Art Unit: 2124

instantiated during the first stage, based upon the library subportions in which the program fragments are stored (column 12, lines 36-52 and column 28, lines 31-46).

Per Claim 20 (New):

The Lewis patent discloses:

- wherein the instantiation of each of the program fragments includes modifying at least one variable associated with the respective program fragment so that the variable reflects an entity with which the program fragment has been associated in accordance with a user command (column 12, lines 36-52 and column 28, lines 31-46).

Per Claim 21 (New):

The Lewis patent discloses:

- wherein the instantiation of the program fragments of the second type includes modifying the variables associated with the respective program fragments of the second type so that the variables respectively conform to the respective variables of the respective program fragments of the first type that were already instantiated (column 12, lines 36-52 and column 28, lines 31-46).

Per Claim 22 (New):

The Lewis patent discloses:

Art Unit: 2124

- **a method of creating a program** (column 11, lines 58-63 and column 12, lines 13-16)
- **providing a library storing a plurality of program fragments respectively within a plurality of library subportions, wherein at least some of the library subportions include a program fragment of a first type and a program fragment of a second type** (column 18, lines 26-39; column 27, lines 44-67 to column 28, lines 1-8; device objects are interpreted as a first type and device symbols are interpreted as a second type)
- **receiving commands to link instances of the program fragments of the first type with one another to form a control program; instantiating the program fragments of the first type about which the commands were received, wherein the instantiating includes modifying variables of those program fragments** (column 12, lines 52-60 and column 28, lines 26-46)
- **and identifying program fragments of the second type corresponding to the instantiated program fragments of the first type based upon the library subportions within which the program fragments are stored** (column 12, lines 36-52 and column 28, lines 31-46).

Per Claim 23 (New):

The Lewis patent discloses:

Art Unit: 2124

- **instantiating the program fragments of the second type, wherein the instantiating includes modifying additional variables of those program fragments so that those variables conform with the variables of the corresponding instantiated program fragments of the first type** (column 12, lines 36-52 and column 28, lines 31-46).

Per Claim 24 (New):

The Lewis patent discloses:

- **wherein the program fragments of the first type provide control logic for industrial control and the program fragments of the second type provide visualization of industrial control** (column 18, lines 26-39; column 27, lines 44-67 to column 28, lines 1-8; device objects are interpreted as a first type and device symbols are interpreted as a second type).

Per Claim 25 (New):

The Lewis patent discloses:

- **a method of creating a program** (column 11, lines 58-63 and column 12, lines 13-16)

- **providing a library storing a plurality of program fragments stored within a plurality of library subportions; providing a model having hierarchically-ordered entities each of which respectively represents at least one of a component of a system and a process of the system** (column 18, lines 26-39; column 27, lines 44-67 to column 28, lines 1-8)

- receiving commands to associate at least some of the program fragments with the hierarchically-ordered entities; instantiating the program fragments about which the commands were received, wherein the instantiating of the program fragments automatically results in establishment of operational connections among the program fragments associated with the different entities (column 12, lines 36-60 and column 28, lines 26-46).

Per Claim 26 (New):

The Lewis patent discloses:

- wherein the instantiating includes modifying variables of the program fragments in a manner signifying the entities with which the program fragments have been associated (column 12, lines 36-60 and column 28, lines 26-46).

Per Claim 27 (New):

The Lewis patent discloses:

- wherein at least some of the library subportions include program fragments of both first and second types, and wherein when first and second program fragments of the first and second types, respectively, are instantiated in association with the same entity, the variables of the first and second program fragments are modified in a common manner that allows

Art Unit: 2124

for operational connections to be achieved between those first and second program fragments (column 12, lines 36-60 and column 28, lines 26-46).

Per Claim 28 (New):

The Lewis patent discloses:

- **a method of creating a program for execution on at least one industrial controller for controlling an industrial process (column 11, lines 58-63 and column 12, lines 13-16)**
- **providing a control program formed from a plurality of primary program fragments that have been instantiated, wherein the instantiated primary program fragments are respectively associated with respective process components that can be represented by elements in a model (column 12, lines 52-60 and column 28, lines 26-46)**
- **identifying a plurality of secondary program fragments stored within a plurality library subportions of a library that correspond to the instantiated primary program fragments within the control program, wherein correspondences between the program fragments are determined based upon whether the primary and secondary program fragments are stored within the same library subportions (column 18, lines 26-39; column 27, lines 44-67 to column 28, lines 1-8)**

Art Unit: 2124

- and instantiating at least some of the plurality of secondary program fragments so that the instantiated secondary program fragments are operationally connected to the instantiated primary program fragments (column 12, lines 36-60 and column 28, lines 26-46).

Per Claim 29 (New):

The Lewis patent discloses:

- wherein the instantiating includes modifying variables of the secondary program fragments in a same manner as corresponding variables of the corresponding primary program fragments were modified to arrive at the control program (column 12, lines 36-60 and column 28, lines 26-46).

Per Claim 30 (New):

The Lewis patent discloses:

- displaying the secondary program fragments stored within at least some of the library subportions that correspond to the instantiated primary program fragments; and receiving user inputs selecting at least some of the secondary program fragments, which causes the instantiating of those secondary program fragments (column 18, lines 26-39; column 27, lines 44-67 to column 28, lines 1-8).

Response to Arguments

9. Applicant's arguments filed on 10/6/03 have been fully considered but they are not persuasive.

In the remarks, the applicant argues that:

a) **Rejections Under 102(b)**

Despite the comments in the Office Action, the Applicants respectfully traverse the rejections of claims 1-18. The Applicant submit that Lewis fails to teach a library system that operates in the manner recited in independent claims 1 and 16. In particular, the Applicants submit that Lewis fails to show at least the following features recited in claim 1:

a second program builder accepting information about the first linking process, and user input, to create a second portion of the control program from second program fragments taken from the same files of the first program fragments used in the first portion of the control program, the second program builder renaming the tags of the control variables of the second program fragments to comport with the renaming of the tags of the control variables of the first portions by the first program builder;

Similarly, the Applicants submit that Lewis fails to show at least the following features recited in claim 16:

a second program builder accepting information identifying the files of the library manager from which the instances of the first program fragments originated to display to a user second program fragments related to each instance of the first program fragments according to common library files, and accepting user input to select among the displayed

second program fragments to create a second portion of the control program from second program fragments, the second program builder renaming the tags of the control variables of the second program fragments to comport with the renaming of the tags of the control variables of the first portions by the first program builder;

In the Office Action, the Examiner points to the following excerpt of the Lewis patent (column 12, lines 36-52 and column 28, lines 31-46) as teaching the abovementioned limitations of pending claims 1 and 16:

The development system includes a device diagramming ... For example, Pump-1.Running is automatically changed to PMP-1236.Running.

Nevertheless, the Applicants disagree that this passage teaches the above-identified features recited in pending claims 1 and 16. Indeed, the Applicants fail to understand the relevance of this passage to the "second program builder" features of claims 1 and 16.

The Applicants' invention relates to a system that facilitates the creation of complex programs that employ program fragments that are stored in a library. The system operates by providing a graphical user interface on which a user is capable of arranging and connecting icons to represent a real-life system (for example, an industrial control system) for which a control program is to be created. ...

Thus, the claimed library system of claims 1 and 16 has a "library manager" that stores, in multiple "unique files", "first and second program fragments" that are related in that they have "shared control variables" having "common tags". Following the creation of a first portion of a

Art Unit: 2124

control program by a first program builder, a "second program builder" creates a second portion of the control program from the second program fragments taken from the files in which the first and second program fragments are stored. Because the related first and second program fragments are stored in the same files, the second program builder is able to recognize the related files and thereby is capable of automatically "renaming the tags of the control variables of the second program fragments to comport with the renaming of the tags of the control variables of the first portions".

These features of claims 1 and 16 involving the recognition of related program fragments based upon the manner in which the fragments are stored, and using such relatedness information to rename the control variables of the related program fragments in the same manner by first and second program builders, are not addressed by the excerpts of the Lewis patent identified in the Office Action. Indeed, the excerpts of the Lewis patent do not appear to discuss first and second program builders, do not appear to discuss related program fragments having shared control variables being stored in dedicated files, and do not appear to discuss the automatic renaming of control variables of secondary program fragments in a manner consistent with the renaming of control variables of primary program fragments based upon the storage of those related program fragments in corresponding dedicated files.

Therefore, for at least these reasons, the Applicants submit that independent claims 1 and 16, as well as claims 2-15 and 17-18 depending therefrom, are allowable over the Lewis Patent.

Examiner's response:

Art Unit: 2124

a) Examiner strongly disagrees with applicant's assertion that Lewis fails to disclose the claimed limitations recited in claims 1 and 16. Lewis clearly shows each and every limitation in claims 1 and 16. Lewis teaches a second program builder ("Note that the user chooses the template on which to base the new device, Pump-1, and specifies the name of the device, PMP-1236. When the user finishes filling out this dialog and clicks OK, he/she has specified all the configured parameters associated with the new device. This might include pages of logic, tag definitions, graphic symbols, and the dynamic behavior of graphic symbols. ... Using object-oriented techniques, UCOS handles all the overhead of making the device unique including making each tag name unique, as is illustrated in the FIG. 14. For example, Pump-1.Running is automatically changed to PMP-1236.Running." in column 12, lines 36-52 and column 28, lines 31-46; device objects are interpreted as a first type and device symbols are interpreted as a second type; Fig. 14 shows an example of the second program builder renaming the tags of the control variables of the second program fragments to comport with the renaming of the tags of the control variables of the first portions by the first portion builder.).

Furthermore, Lewis teaches a library manager collecting in unique files, at least first and second program fragments having shared control variables determining physical inputs or outputs exchanged with the industrial process, the shared control variables having common tags (column 18, lines 26-39; column 27, lines 44-67 to column 28, lines 1-8; device objects are interpreted as a first type and device symbols are interpreted as a second type; The device symbols are selected from an object-oriented repository containing a plurality of device symbols and device objects. Device symbols are associated with device objects, which contain logical instructions and configuration information relating to the represented equipment or control

Art Unit: 2124

function (see abstract). That is, Lewis teaches the recognition of related program fragments based upon the manner in which the fragments are stored in the object-oriented repository.)

In addition, see the rejection above in paragraph 8 for rejection to claims 1 and 16.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

11. Any inquiry concerning this communication from the examiner should be directed to Qamrun Nahar whose telephone number is (703) 305-7699. The examiner can normally be reached on Mondays through Thursdays from 9:00 AM to 6:30 PM. The examiner can also be reached on alternate Fridays.

Art Unit: 2124

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki, can be reached on (703) 305-9662. The fax phone number for the organization where this application or processing is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

QN
December 24, 2003

Kakali Chaki

**KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**